

I claim:

1. A process for measuring and monitoring motor systems, said process comprising:

providing a motor system having at least one component selected from a stator and an armature, said at least one component connected to at least one electrical wire;

incorporating at least one means for data measurement with said at least one electrical wire;

collecting data with said at least one means for data measurement; and

transferring said collected data to a data collection station.

2. A process according to claim 1 wherein said means for measuring data is wrapped around said electrical wire.

3. A process according to claim 2 wherein said means for measuring data is encapsulated and attached to said electrical wire by covering or coating the electrical wire and the means for measuring data with an insulation material.

subas 4. A process according to claim 1 wherein said means for measuring data is selected from optic fibers, sensors, micomachines, and combinations thereof.

5. A process for measuring and monitoring motor systems, said process comprising:

providing a motor system having at least one motor component selected from a stator and an armature, said at least one component connected to at least one electrical wire;

providing at least one means for data measurement;

connecting said at least one means for data measurement with said at least one motor component;

collecting data with said at least one means for data measurement; and

transferring said collected data to a data collection station.

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6. A process according to claim 5 wherein said means for measuring data is contained within a tube.

7. A process according to claim 6 wherein said motor component is a stator and said tube is wound in said stator with said electrical wire.

8. A process according to claim 1 wherein said means for measuring data is selected from optic fibers, sensors, micomachines, and combinations thereof.

9. A process for measuring and monitoring motor systems, said process comprising:

providing a motor system having at least one motor component selected from a stator and an armature, said at least one component connected to at least one electrical wire;

winding at least one optic fiber around said electrical wire;

collecting data with said optic fiber; and

communicating said collected data to at least one sensor located outside said motor.

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